UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

SUPERPEDESTRIAN, INC., and MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Plaintiffs, v. FLYKLY, INC. and ZEHUS, S.R.L., Defendants.	Civil Action No. ____ **Jury Trial Demanded**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Superpedestrian, Inc. ("Superpedestrian") and Massachusetts Institute of Technology ("MIT") (collectively, "Plaintiffs") bring this action for patent infringement against Defendants FlyKly, Inc. ("FlyKly") and ZeHuS, S.R.L. ("ZeHuS") (collectively, "Defendants").

THE PARTIES

1. Superpedestrian, Inc. is a Delaware corporation with its principal place of business at 84 Hamilton Street, Cambridge, MA 02139.

2. MIT is a non-profit educational corporation organized under the laws of the Commonwealth of Massachusetts and is located at 77 Massachusetts Avenue, Cambridge, MA 02139.

3. Upon information and belief, FlyKly, Inc. is a Delaware corporation with its principal place of business at 447 Broadway, 2nd Floor, New York, New York 10013.

4. Upon information and belief, ZeHuS, S.R.L. is an Italian S.R.L. with its principal place of business at Via Gaetano Crespi, 12, Milan, Italy.

5. Upon information and belief, ZeHuS is doing business in the State of New York, including in this Judicial District. ZeHuS has purposefully availed itself of this forum by, among other things, making, shipping, using, offering to sell and selling, and causing others to use, offer to sell, and sell infringing products in the State of New York including in this Judicial District and deriving revenue from such activities.

JURISDICTION

6. This action for patent infringement arises under 35 U.S.C. § 271.

7. This Court has jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. Venue is proper in this Judicial District pursuant to 28 U.S.C. §§ 1400(b) and 1391.

9. This Court has personal jurisdiction over FlyKly and ZeHuS pursuant to N.Y.C.P.L.R. § 301, *et seq*.

BACKGROUND

The Copenhagen Wheel

10. Superpedestrian manufactures a revolutionary bicycle pedaling device called "the Copenhagen Wheel," which turns an ordinary bicycle into an electric hybrid bicycle.

11. The Copenhagen Wheel is a lightweight, modified rear wheel that can be used on almost any bicycle. The Copenhagen Wheel automatically measures the rider's effort and provides a motorized boost when the rider needs it (for example, when the rider is going uphill). The Copenhagen Wheel contains a 350-watt electric motor and a 48-volt lithium-ion battery that combine to generate an energy output three times to ten times greater than a person can generate just by pedaling.

12. The Copenhagen Wheel contains a sensor system that automatically tracks the rider's pedaling patterns, the terrain, and other environmental conditions to determine when the rider needs extra power. When the rider pedals harder or faster, the Copenhagen Wheel pushes with increased power. The rider can vary the level of power assistance through a Superpedestrian smartphone "app." The rider can also use the app to access data regarding his or her rides, such as distances traveled, elevation climbed, and calorie output.

13. The Copenhagen Wheel uses regenerative braking to recover energy. As the rider bikes, the Copenhagen Wheel captures energy when braking or riding downhill that it stores in the lithium-ion battery pack. The rider can also use the wheel in exercise mode, which makes pedaling harder and charges the battery at the same time. Without accounting for regenerative braking, the stored power in the battery gives the bicycle a range of 30 miles.

14. Media outlets across the country have recognized the ingenuity of the Copenhagen Wheel. The *New York Times* commented, "It's rare that a company comes along and reinvents the wheel, but it looks like that is about to happen."[1] *Smithsonian.com* opined that "the Copenhagen Wheel does for electric bicycles what Apple did for mobile computing with the smartphone and tablets."[2] *Time* named the Copenhagen Wheel one of the 25 best inventions of 2014.[3]

Development of the Copenhagen Wheel

15. Assaf Biderman, founder of Superpedestrian and associate director of the SENSEable City Laboratory at MIT ("SENSEable Lab"), developed the Copenhagen Wheel

[1] Nick Bilton, Start-Up Reinvents the Bicycle Wheel, N.Y. Times "Bits" Blog (Oct. 21, 2013 8:59 PM), http://bits.blogs.nytimes.com/2013/10/21/start-up-literally-reinvents-the-bicycle-wheel/.

[2] Tuan C. Nguyen, This Wheel Turns Your Bicycle Into an Electric Hybrid, Smithsonian.com (Dec. 5, 2013), http://www.smithsonianmag.com/innovation/this-wheel-turns-your-bicycle-into-an-electric-hybrid-180948263/.

[3] The 25 Best Inventions of 2014, Time (Nov. 20, 2014), http://time.com/3594971/the-25-best-inventions-of-2014/.

together with Prof. Carlo Ratti, Director of the SENSEable Lab, Christine Outram, a student at MIT, as well as a team of researchers from the SENSEable Lab. The SENSEable Lab was tasked by the Mayor of Copenhagen, Denmark to find a way to motivate more people to use bicycles as a mode of transportation. Biderman and the team reasoned that by giving people the assistance of a motor, more people would choose to bike rather than drive a car, reducing congestion and pollution in overcrowded cities. Biderman and the team also realized that to attract more people to cycling, electric bicycles must be significantly less expensive, which is possible by selling the electric propulsion system as a rear wheel retrofit for existing bikes.

16. Biderman and the team began developing a prototype for the Copenhagen Wheel in 2009.

17. In December 2009, MIT filed three United States provisional patent applications concerning the technology related to the Copenhagen Wheel: No. 61/266,862 (filed on Dec. 4, 2009); No. 61/267,071 (filed on Dec. 6, 2009); and No. 61/267,074 (filed on Dec. 6, 2009).

18. Biderman and the team continued to develop the Copenhagen Wheel technology at MIT between 2009 and 2012 by testing and combining different types of motors, batteries, sensors, and control systems to assess the advantages and disadvantages of different hardware combinations.

Giovanni Alli and ZeHuS

19. Students, visiting students, and research staff at the SENSEable Lab were occasionally involved in the development of Copenhagen Wheel prototypes as the project evolved.

20. On February 28, 2011, Giovanni Alli applied for a six-month position at the SENSEable Lab as a visiting Ph.D. student. Upon information and belief, at the time he

submitted his application Alli was a third-year Ph.D. engineering student at Politecnico di Milano (the Polytechnic University of Milan; "Politecnico"). In his application, Alli expressed the desire to focus his work at the SENSEable Lab on using smartphones to facilitate electric vehicle sharing, including bike sharing.

21. The SENSEable Lab had a previously existing relationship with Politecnico and Alli's advisor, Sergio Savaresi, Professor in the Department of Electronics, Information & Bioengineering at Politecnico. Savaresi was a founder of e-Shock, an Italian company that contracted with the SENSEable Lab to provide the SENSEable Lab with a control unit and battery management system for the new Copenhagen Wheel prototype. In part through this relationship, Alli's application for a position as a visiting Ph.D. student at the SENSEable Lab was accepted and he began his stay at the SENSEable Lab in August 2011.

22. In connection with his visiting student position at the SENSEable Lab, Alli signed an "Inventions and Proprietary Information Agreement" with MIT, in which Alli pledged to disclose and promptly assign to MIT all intellectual property he conceived, invented, reduced to practice, or authored during his research at MIT. A copy of the "Inventions and Proprietary Information Agreement" Alli signed is attached as Exhibit A.

23. On or about August 18, 2011, Alli met with Biderman and Professor Carlo Ratti, Director of the SENSEable Lab, to discuss the work Alli would focus on while at the SENSEable Lab. Biderman, Ratti, and Alli agreed that Alli would devote his research efforts to developing a lightweight prototype of the Copenhagen Wheel which would employ a smaller motor and lower capacity battery than had been used in previous prototypes of the Copenhagen Wheel.

24. Alli spent the next several months collaborating with others at SENSEable Lab to design and develop a lightweight prototype Copenhagen Wheel. The lightweight prototype Alli

helped design was not the prototype Superpedestrian eventually selected to commercialize as the Copenhagen Wheel.

25. After completing his time as a visiting student at the SENSEable Lab, Alli returned to Italy in the spring of 2012. Thereafter, Alli and Savaresi, Alli's advisor at Politecnico, decided to build their own version of the Copenhagen Wheel.

26. In March 2013, Savaresi requested a meeting with Biderman at Superpedestrian to discuss the progress of the commercialization of the Copenhagen Wheel and determine whether there might be an opportunity for cooperation between Superpedestrian and e-Shock. Although Savaresi and Biderman met on March 21, 2013, Savaresi did not disclose that he was involved in a new company—ZeHuS—that was developing a version of a Copenhagen Wheel.

27. Under the direction of Alli, ZeHuS developed a product called "Bike+." ZeHuS's website describes Bike+ as "an all in one e-kit that fully integrates a powerpack (motor, batteries, electronics, bluetooth connection) in a compact rear hub."

28. In August 2013, Biderman learned that ZeHuS had misappropriated Superpedestrian's technology to make its Bike+ product. Shortly thereafter, Biderman approached Alli about ZeHuS's use of Superpedestrian's technology at the Eurobike trade show in Friedrichshafen, Germany. Upon information and belief, Alli denied that Bike+ misappropriated Superpedestrian's technology because, Alli claimed, in addition to being a self-contained retrofitable wheel, the Bike+ wheel did not need to be charged. Biderman pointed out that the main concept of the Copenhagen Wheel is that it is, just like the Bike+ wheel, a self-contained, retrofitable wheel that either can be charged or not charged, depending on the user's choice, to provide electric assistance.

29. Biderman again confronted Alli at the Eurobike trade show in August 2014. Upon information and belief, Alli told Biderman that electric bicycle technology is in the public domain and therefore is not patentable, but confessed that if Superpedestrian's technology was indeed patentable, then ZeHuS would be infringing the patented technology.

30. Just weeks later, at the Interbike trade show in Las Vegas, Nevada, Biderman approached ZeHuS CEO Marcello Segato. Biderman informed Segato that Alli had been a visiting student at MIT, participated in the development of the Copenhagen Wheel, and misappropriated Superpedestrian's technology in the products he designed at ZeHuS. Segato pledged to look into the matter, but Biderman never heard back from Segato.

31. On December 4, 2014, counsel for Superpedestrian wrote to Fabio Marazzi, who Superpedestrian believed to be counsel for ZeHuS. Marazzi confirmed to Superpedestrian that upon receipt of the December 4, 2014 letter, he forwarded the letter to Alli. The letter, which is attached hereto as Exhibit B, placed ZeHuS on formal notice that Superpedestrian had a pending patent application for the technology embodied in the Copenhagen Wheel and alerted ZeHuS of Superpedestrian's belief that ZeHuS would infringe the patent upon its issuance.

FlyKly

32. FlyKly sells the "Smart Wheel." According to FlyKly's website, the Smart Wheel "is a lightweight, highly efficient pedal assist wheel, fully operated through the Smart App on your smart phone."

33. Upon information and belief, FlyKly was founded by Niko Klansek in 2012.

34. Upon information and belief, before Klansek even began development of the Smart Wheel he requested a meeting with Biderman. Klansek first contacted Biderman on

February 13, 2012. Klansek explained that he wanted to "learn more" about the Copenhagen Wheel and "if possible get [a] few wheels."

35. On March 22, 2012, Klansek wrote to Biderman to explain how he had been following the Copenhagen Wheel project for some time and was impressed with what the SENSEable Lab had accomplished. Klansek asked to meet with Biderman so that he could learn more about the Copenhagen Wheel and future plans related to the product. Klansek and Biderman met at the SENSEable Lab on April 5, 2012, where Klansek spoke with Biderman and the team that was working on the Copenhagen Wheel project at the time and discussed the Copenhagen Wheel in detail.

36. In August 2013, FlyKly attempted to secure funding to commercialize the Smart Wheel through Kickstarter, a crowdfunding website which allows members of the public to pledge money to support creative projects in development. FlyKly launched its Kickstarter campaign on October 16, 2013. FlyKly's Kickstarter campaign ended on November 25, 2013. In its Kickstarter campaign, FlyKly offered its backers a variety of "rewards" tied to the value of their contributions. For example, a $1 contribution would earn the backer a "thank you" from FlyKly. For a contribution of $590, a backer would earn a FlyKly Smart Wheel. FlyKly raised $701,239 with contributions from 2,358 "backers" through Kickstarter.

37. Kickstarter's "Rules" and "Terms of Use" require that "creators" (*i.e.*, people who create an account and seek funding from backers) actually create something new, rather than simply re-sell a product designed by someone else. Kickstarter also requires that "[w]hen a project is successfully funded," as FlyKly's was, "the creator must complete the project and fulfill each reward. Once a creator has done so, they've satisfied their obligation to their backers."

38. After learning of FlyKly's plan to commercialize the Smart Wheel through Kickstarter, counsel for Superpedestrian wrote to Klansek on October 18, 2013. The letter, which is attached hereto as Exhibit C, placed FlyKly on formal notice that Superpedestrian had a pending patent application for the technology embodied in the Copenhagen Wheel and alerted FlyKly of Superpedestrian's belief that FlyKly would infringe the patent upon its issuance.

39. Superpedestrian had scheduled a Kickstarter campaign that was due to launch on November 6, 2013. As a result of FlyKly's Kickstarter campaign, which was ongoing at the time, Superpedestrian decided to cancel its Kickstarter campaign and instead created a website through which it sold the Copenhagen Wheel. Upon information and belief, had Superpedestrian carried out a Kickstarter campaign, Superpedestrian would have generated significantly more money due to Kickstarter's viral marketing effect than it did from pre-orders from its website alone.

40. Upon information and belief, after reaching its fundraising goal on Kickstarter, FlyKly encountered significant research and development challenges in engineering, manufacturing and commercializing the Smart Wheel prototype, jeopardizing its ability to fulfill the commitments it made to its backers. Accordingly, in January and February 2014, Klansek reached out to Biderman over email and later visited Biderman. They met at a café in Cambridge, MA, and afterwards conducted a brief tour of Superpedestrian headquarters. Klansek requested in his email communications and at his meeting with Biderman that Superpedestrian sell FlyKly the Copenhagen Wheel so FlyKly could attempt to satisfy its obligation to its Kickstarter backers by providing them the Superpedestrian Copenhagen Wheel in lieu of the FlyKly Smart Wheel.

41. Upon information and belief, Klansek offered Biderman approximately $550,000 of the $701,239 contributed to FlyKly's Kickstarter campaign in exchange for a two percent equity investment by FlyKly in Superpedestrian. Biderman declined the offer, leaving Klansek and FlyKly searching for a new producer to satisfy FlyKly's Kickstarter commitments.

FlyKly-ZeHuS Partnership

42. Upon information and belief, FlyKly entered into a partnership with ZeHuS in April 2014 in which ZeHuS, based on the knowledge that Alli gained while participating in the Copenhagen Wheel prototype design at Superpedestrian, sells one or more products related to the Smart Wheel to FlyKly. FlyKly's Kickstarter page confirmed the partnership by announcing that FlyKly and ZeHuS had "join[ed] forces." Additionally, on April 10, 2014, Klansek informed Biderman that FlyKly and ZeHuS had begun a "merger process." FlyKly's website states that "Milan is where FlyKly production and development takes place, joining in the great Italian tradition of manufacture and design. FlyKly products are Made in Italy."

U.S. Patent No. 9,027,681

43. United States Patent No. 9,027,681 ("the '681 Patent") entitled "Hybrid Sensor-Enabled Electric Wheel and Associated Systems, Multi-Hub Wheel Spoking Systems, and Methods of Manufacturing and Installing Wheel Spokes," was duly and legally issued to MIT on May 12, 2015. A true and correct copy of the '681 Patent is attached as Exhibit D. Since its date of issue, MIT has been and is still the owner of the '681 Patent.

44. On December 19, 2012, MIT and Superpedestrian executed an Exclusive Patent License Agreement (the "Agreement") in which MIT transferred to Superpedestrian all substantial rights under the patents and patent applications listed in Appendix A of the Agreement. A true and correct copy of the Agreement is attached as Exhibit E. One of the

patent applications in Appendix A of the Agreement is Patent Application No. 12/960,461 ("the '461 Application"), filed December 3, 2010, and entitled "Hybrid Sensor-Enabled Electric Wheel and Associated Systems, Multi-Hub Wheel Spoking Systems, and Methods of Manufacturing and Installing Wheel Spokes." The '461 Application eventually issued as the '681 Patent. Superpedestrian is thus an exclusive licensee and possesses all substantial rights to the '681 Patent.

45. Upon information and belief, FlyKly and ZeHuS make, use, offer to sell, sell and/or import Smart Wheel and Bike+ (the "Accused Products"), products which use Superpedestrian's patented technology. In particular, the Accused Products incorporate, *inter alia*, an electronic motor, a mechanical drive unit, a sensing system, a control unit to control the electronic motor, and a power source, as claimed in the '681 Patent.

46. Despite being notified directly by Superpedestrian's counsel of Superpedestrian's pending patent application and Superpedestrian's belief that the Accused Products would infringe the claims that issued from the pending application, FlyKly and ZeHuS formed a partnership to develop (and continue to develop) the Accused Products. FlyKly and ZeHuS have induced their partners, customers, distributors, and/or end users to use, offer for sale, sell and/or import into the United States the Accused Products.

COUNT I FOR INFRINGEMENT OF U.S. PATENT NO. 9,027,681

47. The allegations in paragraphs 1-46 are realleged and incorporated herein by reference.

48. FlyKly and ZeHuS currently infringe and have infringed one or more claims of the '681 Patent in violation of 35 U.S.C. § 271(a) by making, using, offering to sell, selling and/or importing into the United States the Accused Products.

49. FlyKly and ZeHuS currently infringe and have infringed one or more claims of the ‘681 Patent in violation of 35 U.S.C. § 271(b) by actively inducing their partners, customers, distributors, and/or end users to use, offer for sale, sell and/or import into the United States the Accused Products, and therefore FlyKly and ZeHuS induce others to directly infringe the ‘681 Patent.

50. FlyKly and ZeHuS currently infringe and have infringed one or more claims of the ‘681 Patent in violation of 35 U.S.C. § 271(c) by offering to sell, selling and/or importing into the United States components of the Accused Products constituting a material part of the patented invention, knowing the same to be especially made or especially adapted for use in infringement of the ‘681 Patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

51. End users that use the Accused Products directly infringe the ‘681 Patent.

52. FlyKly has been on notice of the patent application that issued as the ‘681 Patent since October 18, 2013. FlyKly has been on notice of the ‘681 Patent since at least the filing of this Complaint.

53. ZeHuS has been on notice of the patent application that issued as the ‘681 Patent since December 4, 2014. ZeHuS has been on notice of the ‘681 Patent since at least the filing of this Complaint.

54. Plaintiffs have been and will continue to be damaged as a result of Defendants’ infringing conduct, as described in this Complaint.

WHEREFORE, Plaintiffs demands judgment against Defendants as follows:

(a) enjoining Defendants from the manufacture, use, offer to sell, sale, or importation of the Accused Products, in accordance with 35 U.S.C. § 283;

(b) awarding Plaintiffs damages or other monetary relief in accordance with 35 U.S.C. § 154 and 35 U.S.C. § 284 to compensate Plaintiffs for any and all manufacture, use, offers to sell, sales, or importation of the Accused Products;

(c) declaring this to be an exceptional case, pursuant to 35 U.S.C. § 285, and awarding Plaintiffs their attorneys' fees;

(d) awarding Plaintiffs any further and additional relief as this Court deems just and proper.

JURY TRIAL DEMAND

Superpedestrian hereby requests a trial by jury of all issues so triable.

Dated: January 7, 2016

Respectfully submitted,

Plaintiffs Superpedestrian, Inc. and
Massachusetts Institute of Technology

By their attorneys,

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